

# Journal of Criminal Law and Criminology

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Volume 102 | Issue 2

Article 3

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Spring 2012

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### Recommended Citation

Andrew V. Papachristos, Tracy L. Meares, and Jeffrey Fagan, *Why Do Criminals Obey the Law? The Influence of Legitimacy and Social Networks on Active Gun Offenders*, 102 J. CRIM. L. & CRIMINOLOGY 397 (2013).  
<https://scholarlycommons.law.northwestern.edu/jclc/vol102/iss2/3>

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# CRIMINOLOGY

## WHY DO CRIMINALS OBEY THE LAW? THE INFLUENCE OF LEGITIMACY AND SOCIAL NETWORKS ON ACTIVE GUN OFFENDERS\*

ANDREW V. PAPACHRISTOS,\*\* TRACEY L. MEARES\*\*\* &  
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*Research on procedural justice and legitimacy suggests that compliance with the law is best secured not by mere threat of force, but by fostering beliefs in the fairness of the legal systems and in the legitimacy of legal actors. To date, however, this research has been based on general population surveys and more banal types of law-violating behavior (such as unpaid parking tickets, excessive noise, etc.). Thus, while we know why the average citizen obeys the law, we do not have similar knowledge about populations most likely to commit serious violent crimes. This study fills that void by using a unique survey of active offenders called the Chicago Gun Project (CGP). The CGP was designed to understand how the social networks of offenders influence their perceptions of the law and subsequent*

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\* We thank the following individuals for support and comments on this study: the PSN Working Group, Danielle Wallace, Franklin Harris, Tom Tyler, Donald Tomaskovic-Devey, David Kirk, David Kennedy, the SADRI working paper series at the University of Massachusetts, and workshop participants at Fordham Law School. This project was supported by Grant # 2003-GP-CX-0573 awarded by the Bureau of Justice Assistance through the Illinois Criminal Justice Information Authority. The Bureau of Justice Assistance is a component of the Office of Justice Programs, which also includes the Bureau of Justice Statistics, the National Institute of Justice, the Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime. Points of view or opinions contained within this document are those of the author and do not represent the official position or policies of the U.S. Department of Justice or the Illinois Criminal Justice Information Authority.

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*law-violating behavior. The findings suggest that while criminals as a whole have negative opinions of the law and legal authority, these offenders are more likely to comply with the law when they believe in (a) the substance of the law, and (b) the legitimacy of legal actors, especially the police. Moreover, we find that opinions of compliance with the law are not uniformly distributed across the sample population. In other words, not all criminals are alike in their opinions of the law. Gang members—but especially gang members with social networks saturated with criminal associates—are significantly less likely to view the law and its agents as legitimate forms of authority. In contrast, those individuals (including gang members) with less saturated networks actually tend to have more positive opinions of the law.*

# I. INTRODUCTION

Why do criminals break the law? Although answers to this question typically incorporate individual, contextual, and socio-psychological explanations, the dominant sociological explanations tend to rely heavily on neighborhood structural considerations. That is, most sociologists look to correlates between crime and delinquency on the one hand, and neighborhood social conditions, formal and informal social control, socialization processes, and properties of social networks on the other, to explain why offenders offend.<sup>1</sup> A shorthand way to summarize this rich research tradition is to say that individuals are more likely to break the law when they live in neighborhoods bereft of social, economic, and human capital, when their social networks are saturated with criminal peers and opportunities, and when they are socialized into dense delinquent networks that do not fully admonish deviant behaviors.

Why do people obey the law? This question is not merely the former question's mirror image. An emergent group of social psychologists and legal scholars have undertaken this inquiry and have considered it to be fundamentally different from the question we asked at the outset. An impressive body of research has followed, remaining for the most part distinct from mainstream sociological theorizing. One of the most important findings from this vein of research is that punishment *processes* matter a great deal more for encouraging compliance than do punishments

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<sup>1</sup> See generally CLIFFORD R. SHAW & HENRY D. MCKAY, *JUVENILE DELINQUENCY IN URBAN AREAS* (1942); EDWIN H. SUTHERLAND, *PRINCIPLES OF CRIMINOLOGY* (4th ed. 1947); MARK WARR, *COMPANIONS IN CRIME* (2002); Robert J. Sampson, Stephen W. Raudenbush & Felton Earls, *Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy*, 277 SCI. 918 (1997).

themselves.<sup>2</sup> These conclusions are generally based upon surveys of, or experiments with, people in the general population, where criminal offending is rare. And, in contrast to sociological studies that tend to investigate serious and violent crimes, sociolegal scholars exploring compliance tend to study banal violations such as failure to pay parking tickets, speeding, tax compliance, and so on.<sup>3</sup>

Both research traditions have produced valuable insights regarding law-violating and law-abiding behaviors. However, both approaches also overlook a simple fact of criminality: most criminals—whether serial killers, professional robbers, drug dealers, or embezzlers—comply with the law most of the time. Crimes are episodic, rare events in the everyday lives of just about all offenders. With a few exceptions, the standard sociological approach to the study of crime and deviance focuses solely on the illegal behaviors of offenders, with very little consideration of their law-abiding behaviors. Conversely, compliance research tends to focus on ordinary citizens who have very little desire or ability, or few opportunities, to engage in more serious forms of street crimes. In short, while we have many explanations about why criminals break the law and why ordinary citizens obey the law, we rarely ask: *why do criminals obey the law?*

We attempt a study of compliance by surveying active offenders through the Chicago Gun Project (CGP). The CGP posed a series of individual, neighborhood, legitimacy, and social network questions to a sample of 141 offenders in fifty-two Chicago neighborhoods. The survey, originally part of a larger research project, was specifically designed to incorporate a sociological understanding of criminal offending with a focus on offenders' perceptions of legitimacy of law and legal actors as a path to reduction of or desistance from violent crime.<sup>4</sup> The CGP examined how offenders' perceptions of the law and social networks influence their understanding of legal authority and subsequent law-violating behavior.

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<sup>2</sup> See, e.g., TOM R. TYLER, *WHY PEOPLE OBEY THE LAW* (1990); Tracey L. Meares, Neal Katyal & Dan M. Kahan, *Updating the Study of Punishment*, 56 STAN. L. REV. 1171, 1193–97 (2004); Raymond Paternoster et al., *Do Fair Procedures Matter? The Effect of Procedural Justice on Spouse Assault*, 31 LAW & SOC'Y REV. 163, 166, 192 (1997); Tom R. Tyler, *Procedural Justice, Legitimacy, and the Effective Rule of Law*, 30 CRIME & JUST. 283–357 (2003).

<sup>3</sup> TYLER, *supra* note 2 (analyzing and discussing a variety of compliance behaviors across multiple studies and surveys); Steven Klepper & Daniel Nagin, *The Deterrent Effect of Perceived Certainty and Severity of Punishment Revisited*, 27 CRIMINOLOGY 721, 722 (1989) (studying perceptual deterrence among a sample of predominantly middle-aged administrators).

<sup>4</sup> See Andrew V. Papachristos, Tracey L. Meares & Jeffrey Fagan, *Attention Felons: Evaluating Project Safe Neighborhoods in Chicago*, 4 J. EMPIRICAL LEGAL STUD. 223, 224 (2007).

Unlike prior studies of criminal offending, this study examines how perceptions of the law—and its agents—influence compliance. Unlike prior research on compliance, this study surveys the subgroup most likely to be the perpetrators and victims of crime, rather than a random sample of the general population. Thus, the CGP offers two considerable advancements over prior research on both criminal offending and compliance.

Our findings suggest that while criminals as a group have negative opinions of the law and legal authority, gun offenders (just like non-criminals) are more likely to comply with the law when they believe (a) in the legitimacy of legal actors, but especially the police, and (b) that the substance of the law is consistent with their own moral schedules. Moreover, we find variation among respondents' opinions of and compliance with the law. Gang members—but especially gang members with social networks saturated with criminal associates—are significantly less likely to view the law and its agents as legitimate. But individuals (including gang members) with less saturated criminal networks actually tend to have more positive opinions of the law, albeit opinions that are still quite negative overall.

The paper proceeds as follows. We begin with a theoretical integration of the literatures on procedural justice and the social network variation of peer influence in order to make clear how peer social networks influence individual perceptions of the law. This section explains why the question we pose is important. We next explain the unique nature, value, and limitations of the CGP survey as well as why, despite limitations, it is well suited to answer the central question of our study. We then turn to a discussion of our measurements of legitimacy and social networks, followed by the results of regressions predicting both offender perceptions and illegal behaviors. We conclude with a discussion of the theoretical significance of our findings.

## II. WHY DO (“NORMAL”) PEOPLE OBEY THE LAW?

Research on compliance with the law has flourished over the last two decades. Pioneered by Tom Tyler in *Why People Obey the Law*, this research emphasizes at least two explanations for compliance with the law and obedience to authority—forced compliance and procedural justice—and then elucidates the difference between them.<sup>5</sup>

The notion of forced compliance is perhaps the oldest and most basic explanation as to what holds a society together: people obey the law largely

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<sup>5</sup> Tyler also discusses a third normative basis for compliance, which he called morality-based to distinguish it from the legitimacy-based form that we emphasize here. See TYLER, *supra* note 2, at 24–27.

out of fear of reprisal from those who hold control over the formal mechanisms of power and punishment. Although scholars have long rejected the simplistic idea that forced compliance alone can breed compliance with the law, these notions of forced compliance form the foundation of deterrence-based crime policies. Policymakers committed to this school of thought believe compliance with the law can be increased by manipulating the severity, certainty, and swiftness of formal legal sanctions.<sup>6</sup> In fact, our most commonly touted criminal justice policies involve increasing the threat and actual use of formal sanctions, such as three-strikes laws, mandatory minimum sentencing guidelines, and increased penalties for certain types of crimes.

In the Durkheimian tradition, compliance procured solely by the imposition or threat of formal sanctions is costly and, as such, the social order is best guaranteed by gaining support for the legitimacy of the ruling authority. That is, a society will experience greater compliance with the law when a majority of the population shares the belief that the decisions of the ruling powers are legitimate and that the laws are just and “ought” to be obeyed.<sup>7</sup> “[A] legitimate authority is one that is regarded by people as entitled to have its decisions and rules accepted and followed by others.”<sup>8</sup> As David Smith summarizes:

[S]ocial order depends on the widespread belief that the authorities, and their political and legal framework, are legitimate. As long as that belief is widespread, people will largely regulate their own behavior by reference to internalized values that correspond with the law and its underlying principles, and force need only occasionally be used when people get out of line.<sup>9</sup>

Thus, from this perspective compliance with the law is best secured by fostering beliefs in the fairness of the legal systems and in the legitimacy of legal actors. Zelditch delves deeper by explaining the conditions under

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<sup>6</sup> For a recent review, see Jeffrey Fagan & Tracey L. Meares, *Punishment, Deterrence and Social Control: The Paradox of Punishment in Minority Communities*, 6 OHIO STATE J. CRIM. L. 173, 175–85 (2008).

<sup>7</sup> See, e.g., DAVID BEETHAM, *THE LEGITIMATION OF POWER* 15–16 (1991) (defining legitimacy along three dimensions, including rules that are justified “by reference to beliefs shared by both dominant and subordinate”); TYLER, *supra* note 2 (discussing this principle generally as it relates to procedural justice and legitimacy).

<sup>8</sup> COMM. TO REVIEW RESEARCH ON POLICE POLICY & PRACTICES, NAT’L RESEARCH COUNCIL, *FAIRNESS AND EFFECTIVENESS IN POLICING: THE EVIDENCE* 297 (Wesley Skogan & Kathleen Frydl eds., 2004) (citation omitted).

<sup>9</sup> David J. Smith, *The Foundations of Legitimacy*, in *LEGITIMACY AND CRIMINAL JUSTICE* 30, 30 (Tom R. Tyler et al. eds., 2007).

which legitimation can occur.<sup>10</sup> Key to his discussion is the importance of consensus in norms, values, beliefs, purposes, practices, and procedures.

People encounter the “law” through their direct and indirect experiences with legal actors and the legal system.<sup>11</sup> These encounters shape an individual’s perception of the law and her judgments about its fairness and legitimacy, whether the encounters are mundane (getting a parking ticket) or potentially traumatic (facing an accuser in court). For example, in one particularly fascinating piece of research, Paternoster et al. demonstrate that individuals arrested in domestic assault cases are more likely to say that their detention or sentence was “fair” when they are treated with respect by police and prosecutors.<sup>12</sup> Importantly, experiencing a procedure of the law as legitimate is more influential on perceptions of authority and of the law than the actual outcome of the encounter.<sup>13</sup> In other words, people will view a decision or law as legitimate even if the outcome (such as a court decision or a police action) works against their own self-interest, so long as they view the process by which said decision was made as being procedurally just.<sup>14</sup>

When we refer to legitimacy here, we draw on the social psychological interpretation of that term, as opposed to a normative vision of it. Tyler refers to compliance that flows from a belief that authorities have the right to dictate proper behavior to others as legitimacy-based.<sup>15</sup> Social psychologists have shown that people are more likely to view authorities and the decision that these authorities make as legitimate, and thus worthy of deference, when authorities treat people with dignity and fairness, i.e., when authorities are procedurally fair.

In the social psychological literature, judgments regarding fairness depend primarily upon a model of *procedural justice*,<sup>16</sup> and that model, in

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<sup>10</sup> Morris Zelditch Jr., *Legitimacy Theory*, in CONTEMPORARY SOCIAL PSYCHOLOGICAL THEORIES 324 (Peter J. Burke ed., 2006).

<sup>11</sup> Anthony Bottoms & Justice Tankebe, *Beyond Procedural Justice: A Dialogic Approach to Legitimacy in Criminal Justice*, 102 J. CRIM. L. & CRIMINOLOGY 119, 145–47 (2012).

<sup>12</sup> Paternoster et al., *supra* note 2, at 194.

<sup>13</sup> Tom R. Tyler & Jeffrey Fagan, *Legitimacy and Cooperation: Why Do People Help the Police Fight Crime in Their Communities?*, 6 OHIO STATE J. CRIM. L. 231, 265 (2008).

<sup>14</sup> See generally E. ALLAN LIND & TOM R. TYLER, THE SOCIAL PSYCHOLOGY OF PROCEDURAL JUSTICE (1988) (discussing studies demonstrating that individuals’ views of the system depend on justice of procedures as well as justice of outcome).

<sup>15</sup> TYLER, *supra* note 2 (discussing the principles of legitimacy and how they relate to procedural justice and compliance).

<sup>16</sup> Blader and Tyler find support for a hypothesized four-component model of procedural justice wherein people are influenced by two aspects of formal procedures of the group—those that indicate quality of decisionmaking and those that relate to quality of treatment, and additionally people are separately influenced by two aspects of authorities with whom

turn, has a few dimensions. First, participation is an important element. People report higher levels of satisfaction in encounters with authorities when they have an opportunity to explain their situation and perspective on it.<sup>17</sup> Second, people care a great deal about the fairness of decisionmaking by authorities.<sup>18</sup> That is, they look to indicia of decisionmaker neutrality, objectivity and factuality of decisionmaking, consistency in decisionmaking, and transparency. Third, people care a great deal about how they are treated by organizational leaders. Specifically, people desire to be treated with dignity, with respect for their rights, and with politeness.<sup>19</sup> Fourth, in their interactions with authorities people want to believe that authorities are acting out of a sense of benevolence toward them. That is, people attempt to discern why authorities are acting the way they do by assessing *how* they are acting. They want to trust that the motivations of the authorities are sincere, benevolent, and well-intentioned.

Lind and Tyler argue that these elements of procedural justice are important indicators to individuals about how the authority in question views the group to which the evaluator perceives herself belonging.<sup>20</sup> Procedures and practices that all parties regard as “fair” facilitate positive relations among group members and preserve the fabric of society even in the face of conflicts of interest that exist in any group whose members have different preferences and different beliefs concerning how the group should manage its affairs.<sup>21</sup> While the particular outcome of a case or interaction with authorities resulting in a decision may not be obvious, it is almost always clear how parties should proceed and be treated in that particular case. Procedural justice, then, is a subjective evaluation of a spectrum of behaviors and signals conveyed by the decisionmaker to the person upon whom she exercises authority or control.

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they deal—the quality of the decisions authorities make and the quality of treatment they receive from authorities. Steven L. Blader & Tom R. Tyler, *A Four-Component Model of Procedural Justice: Defining the Meaning of a “Fair Process,”* 29 PERSONALITY & SOC. PSYCHOL. BULL. 747, 747 (2003); see also LIND & TYLER, *supra* note 14, at 221–41; Tom R. Tyler & E. Allan Lind, *A Relational Model of Authority in Groups*, 25 ADVANCES IN EXPERIMENTAL SOC. PSYCHOL. 115, 158–59 (1992).

<sup>17</sup> Tom R. Tyler, *Enhancing Police Legitimacy*, 593 ANNALS AM. ACAD. POL. & SOC. SCI. 84, 94 (2004).

<sup>18</sup> See Tom R. Tyler & Cheryl Wakslak, *Profiling and Police Legitimacy: Procedural Justice, Attributions of Motive, and Acceptance of Police Authority*, 42 CRIMINOLOGY 253, 276 (2004) (concluding such treatment led to a lower belief in the occurrence of racial profiling).

<sup>19</sup> *Id.* at 277.

<sup>20</sup> LIND & TYLER, *supra* note 14.

<sup>21</sup> *Id.*



A related vein of research regarding legal cynicism suggests that mistrust of legal authorities, especially the police, can manifest itself in a larger cynicism towards the law *as well as* increased levels of neighborhood crime.<sup>22</sup> This growing body of research demonstrates that individual cynicism in urban neighborhoods stems from negative interactions with the police. In fact, a recent study by Kirk and Papachristos finds that such legal cynicism is even more highly correlated with neighborhood levels of crime than are more traditional risk factors associated with high crime rates such as poverty, inequality, and unemployment.<sup>23</sup>

Although this body of research on compliance with the law provides numerous insights into our understanding of the law and obedience to it, it is not without its limitations. Two limitations are particularly relevant to the present study. First, most procedural justice research to date has emphasized general opinions of the law and political culture as opposed to specific law-violating or deviant behaviors. Further, most studies are conducted on general population samples or subsamples within particular cities, neighborhoods, or racial groups.<sup>24</sup> So, while we know quite a bit about why the vast majority of individuals obey the law, we know very little about the perceptions of the law among those few who are actively engaged in committing more serious crimes. Addressing this gap in the research is critical, given that we have long known that most serious violent crime concentrates among a small proportion of active criminal offenders.<sup>25</sup>

A second shortcoming of current procedural justice research is its limited conception of the “social.” While empirical research demonstrates that an individual’s perceptions of the law and legal actors are influenced by

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<sup>22</sup> See, e.g., David S. Kirk & Mauri Matsuda, *Legal Cynicism, Collective Efficacy, and the Ecology of Arrest*, 49 CRIMINOLOGY 443, 467 (2011) (concluding that crimes in neighborhoods with high levels of cynicism are less likely to lead to arrest); David S. Kirk & Andrew V. Papachristos, *Cultural Mechanisms and the Persistence of Neighborhood Violence*, 116 AM. J. SOC. 1190, 1228–29 (2011) (finding evidence of a positive relationship between legal cynicism and neighborhood violence).

<sup>23</sup> Kirk & Papachristos, *supra* note 22, at 1221.

<sup>24</sup> See, e.g., John Hagan, Carla Shedd & Monique R. Payne, *Race, Ethnicity, and Youth Perceptions of Criminal Injustice*, 70 AM. SOC. REV. 381, 381 (2005) (comparing African Americans with hispanic and white students in the Chicago Public Schools). See generally TYLER, *supra* note 2; TOM TYLER & YUEN J. HUO, TRUST IN THE LAW 82, 187 (2002) (showing the relationship between procedural fairness in police encounters and court experiences and compliance with the law in residents of Oakland and Los Angeles, California neighborhoods).

<sup>25</sup> For example, Braga et al. estimate that in 2006, 1% of Boston youth ages fifteen to twenty-four were involved in street gangs and that Boston gang members were involved as offenders or victims in 70% of fatal and non-fatal shootings. Anthony A. Braga, David Hureau & Christopher Winship, *Losing Faith? Police, Black Churches, and the Resurgence of Youth Violence in Boston*, 6 OHIO ST. J. CRIM. L. 141, 153–54 (2008).

her own interactions and experiences, the research does not account for the influence of other individuals in a person's social network. Although Tyler has clearly hypothesized and demonstrated that people will alter their behavior because they fear the consequences of *informal* sanction imposed by friends and family,<sup>26</sup> we argue here that one's *social networks* influence one's perceptions of the procedural justice of specific encounters and of the law generally, which redounds to normative, as opposed to instrumental, bases of compliance. This conceptualization has not to our knowledge been operationalized in other procedural justice research.

We know from research within both criminology and sociology that peer influence is a powerful force for both law-abiding and law-violating behavior.<sup>27</sup> Furthermore, studies of social networks demonstrate that the nature and structure of an individual's social relationships can have a profound effect on a wide range of social and individual behaviors, including suicide,<sup>28</sup> obesity,<sup>29</sup> the adoption of a particular technology,<sup>30</sup> political behaviors,<sup>31</sup> and deviant behavior.<sup>32</sup> But the literature on peer influences on crime and delinquency stops at the epidemiologic; no study, to the best of our knowledge, examines the shared experiences of peers with respect to their interactions with the law. As a result, we know little about the intersection of social networks, procedural justice, and criminal behavior.

In this study, we address these gaps in theory and research in two ways. First, we examine the perceptions of the law held by active street criminals and, in turn, how these perceptions shape subsequent patterns of

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<sup>26</sup> TYLER, *supra* note 2, at 3–10, 22–27.

<sup>27</sup> SUTHERLAND, *supra* note 1, at 616–17, 622–23; WARR, *supra* note 1, at 119; Dana L. Haynie, *Delinquent Peers Revisited: Does Network Structure Matter?*, 106 AM. J. SOC. 1013, 1038–40 (2001).

<sup>28</sup> Peter S. Bearman & James Moody, *Suicide and Friendships Among American Adolescents*, 94 AM. J. PUB. HEALTH 89 (2004).

<sup>29</sup> Nicholas A. Christakis & James H. Fowler, *The Spread of Obesity in a Large Social Network over 32 Years*, 357 NEW ENG. J. MED. 370 (2007).

<sup>30</sup> See generally David Strang & Sarah A. Soule, *Diffusion in Organizations and Social Movements: From Hybrid Corn to Poison Pills*, 24 ANN. REV. SOC. 265 (1998) (reviewing the literature and statistical models on network diffusion).

<sup>31</sup> See generally John P. Heinz, Edward O. Laumann, Robert H. Salisbury & Robert L. Nelson, *Inner Circles of Hollow Core? Elite Networks in National Policy Systems*, 52 J. POL. 356 (1990) (describing network influence on political processes).

<sup>32</sup> See, e.g., Jean Marie McGloin & Alex R. Piquero, *On the Relationship Between Co-Offending Network Redundancy and Offending Versatility*, 47 J. RES. CRIME & DELINQ. 63 (2010) (concluding that density of offending networks relates with network density). See generally Andrew V. Papachristos, *The Coming of a Networked Criminology? Using Social Network Analysis in the Study of Crime and Deviance*, in 17 ADVANCES IN CRIMINOLOGICAL THEORY 101 (John MacDonald ed., 2011) (reviewing network research in criminology).

offending. Understanding what motivates criminals to obey the law advances our understanding of compliance more broadly. Second, we analyze the effect of the form and content of one's social networks on (a) his perceptions of the law and (b) his subsequent compliance with the law. Thus our research project presents a theoretically and methodologically integrated study from the field of social networks and the growing literature on procedural justice and compliance.

### III. WHY DO CRIMINALS BREAK THE LAW? A NETWORKED APPROACH

The finding that there is a high degree of correlation between the number of delinquent or criminal associates an individual has and his level of offending is one of the most resilient findings in criminology.<sup>33</sup> Several prominent criminological theories—but especially learning, social control, and opportunity theories—tap into this foundational criminological insight by suggesting that criminal motives, norms, techniques, and opportunities are influenced by the company one keeps. Criminologists typically test this idea by counting the number of delinquent peers one has through observational data (arrest records) or self-reported surveys and correlating these counts with the outcome of interest.<sup>34</sup> Economists approach this question somewhat differently, looking at population variation in the effects of exposure to crime-involved persons of similar ages for varying periods of time.<sup>35</sup> These studies generate meaningful evidence on the criminogenic effects of exposure to other criminally active persons, but they undertheorize both the strength of these contacts and the types of information and experience that people in close proximity and in frequent interaction share.

Social network analysis provides a theoretical scaffold to unpack peer and network effects on crime and delinquency.<sup>36</sup> Whereas traditional research usually counts the number of delinquent peers a person associates with, social network analysis uses theoretical and statistical models to conceptualize and measure the actual architecture of social relationships

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<sup>33</sup> For a review, see WARR, *supra* note 27.

<sup>34</sup> See, e.g., Mark Warr, *Age, Peers, and Delinquency*, 31 CRIMINOLOGY 17, 29–30 (1993) (demonstrating the relationship between number of delinquent friends and delinquency).

<sup>35</sup> E.g., Patrick Bayer, Randi Hjalmarsson & David Pozen, *Building Criminal Capital Behind Bars: Peer Effects in Juvenile Corrections*, 124 Q.J. ECON. 105, 135 (2009) (showing strong evidence of peer influences among incarcerated juvenile offenders for burglary, petty larceny, drug offenses, aggravated assault, and felony sex offenses).

<sup>36</sup> For recent reviews on the state of network analysis in criminological research, see Jean Marie McGloin & David S. Kirk, *An Overview of Social Network Analysis*, 21 J. CRIM. JUST. EDUC. 169 (2010); Papachristos, *supra* note 32.

among individuals.<sup>37</sup> In this way, researchers can derive specific hypotheses regarding the size, content, and patterning of social relationships. Such a methodological approach provides evidence of network effects on deviant and criminal behavior.<sup>38</sup>

Network-oriented research has highlighted three dimensions of network effects on crime and deviance: (1) a social group's level of cohesion, (2) a person's position within this network, and (3) the levels of social interactions within these networks. The cohesion of a network broadly refers to the level of "connectedness" among a group's members, i.e., a cohesive group is one in which pockets of people "stick together" or feel a strong sense of belonging.<sup>39</sup> In network terms, cohesion is most frequently measured as the overall *density* of network ties: the greater the proportion of ties among network members, the more cohesive the group is considered to be. Cohesive groups often are efficient information markets that facilitate the transmission of social norms, behavioral contingencies, and cognitive frameworks for internalizing social interactions outside the network.<sup>40</sup> What is more, both learning and social control theories suggest that more densely connected groups are better able to monitor the behavior of their members and thereby constrain, control, or coerce certain levels of conformity of group members. Dense networks may also cut off non-sanctioned opportunities, behaviors, or information<sup>41</sup> and also provide ample learning opportunities for criminal skills, as well as situations or opportunities to engage in criminal or deviant behavior.<sup>42</sup>

Of course, individual network members vary with regard to access to opportunities or information. An individual's *position in a network* influences her perceptions, behaviors, and access to opportunities and

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<sup>37</sup> See, e.g., Haynie, *supra* note 27; Dana L. Haynie, *Friendship Networks and Delinquency: The Relative Nature of Peer Delinquency*, 18 J. QUANTITATIVE CRIMINOLOGY 99 (2002) [hereinafter Haynie, *Friendship Networks*]; Jean Marie McGloin & Lauren O'Neill Shermer, *Self-Control and Deviant Peer Network Structure*, 46 J. RES. CRIME & DELINQ. 35 (2009).

<sup>38</sup> See generally Papachristos, *supra* note 32, at 115–21.

<sup>39</sup> See STANLEY WASSERMAN & KATHERINE FAUST, *SOCIAL NETWORK ANALYSIS* 101–03, 271–72 (1994).

<sup>40</sup> See, e.g., James S. Coleman, *Social Capital in the Creation of Human Capital*, 94 AM. J. SOC. S95, S112, S115 (1988) (demonstrating the role of network closure on the development of social capital).

<sup>41</sup> See, e.g., Ronald S. Burt, *Social Contagion and Innovation: Cohesion Versus Structural Equivalence*, 92 AM. J. SOC. 1287, 1292, 1302 (1987) (finding that the diffusion of technology is related to network structure).

<sup>42</sup> See, e.g., Haynie, *supra* note 27 (linking network structures and aspects of learning theory). See generally Robert Agnew, *Foundation for a General Strain Theory of Crime and Delinquency*, 30 CRIMINOLOGY 47 (1992).

information.<sup>43</sup> Peripheral members, for instance, may lack the same degree of trust as more actively involved members or might be excluded from smaller cliques, such as leadership circles. Conversely, centrally located members may be so saturated with group ties that their worldviews are constrained by the group itself. Research by Haynie and McGloin and Shermer supports this hypothesis by showing that youth who are more centrally located in deviant social networks actually have fewer ties to more conventional individuals and opportunities, which in turn leads to heightened levels of delinquency.<sup>44</sup> Likewise, qualitative and quantitative research on gang membership suggests that “core” gang members tend to be more actively involved in the deviant aspects of gang life than are their non-core counterparts.<sup>45</sup>

Finally, the *quality of interactions* within a network is related to the deviant behavior of its members. Learning and opportunity theories posit that the more time spent with deviant peers, the greater the level of reported delinquency of an individual.<sup>46</sup> Stronger relationships—ties that are *multiplex* or based on overlapping social roles and expectations—exert a greater influence on deviant behaviors than do weak or transient relationships.<sup>47</sup> This means that close friends, family members, and other network members with whom an individual interacts on a regular basis are more likely to exert a stronger influence on an individual’s actual behavior than a mere acquaintance or passing contact is.<sup>48</sup>

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<sup>43</sup> See, e.g., RONALD S. BURT, *STRUCTURAL HOLES* (1992) (regarding the relationship between network structure, informational flows, and returns to network brokerage).

<sup>44</sup> Haynie, *supra* note 27; McGloin & Shermer, *supra* note 37.

<sup>45</sup> E.g., Scott H. Decker & G. David Curry, *Addressing Key Features of Gang Membership*, 28 J. CRIM. JUST. 477, 479–80 (2000) (discussing different positions within gang structures); see TERENCE P. THORNBERRY ET AL., *GANGS AND DELINQUENCY IN DEVELOPMENTAL PERSPECTIVE* 32–55 (2003).

<sup>46</sup> Haynie, *Friendship Networks*, *supra* note 37; see, e.g., Ross L. Matsueda, *Testing Control Theory and Differential Association: A Causal Modeling Approach*, 47 AM. SOC. REV. 489 (1982) (providing evidence in support of differential association theory); Ronald Akers & Gary Jensen, *Empirical Status of Social Learning Theory: Past, Present, and Future*, in *ADVANCES IN CRIMINOLOGICAL THEORY* 37, 51 (Francis Cullen, J.P. Wright & K. Blevins eds., 2006) (reviewing robust empirical evidence of learning processes through peer interactions). See generally SUTHERLAND, *supra* note 27.

<sup>47</sup> See, e.g., Marvin D. Krohn, *The Web of Conformity: A Network Approach to the Explanation of Delinquent Behavior*, 33 SOC. PROBS. S83–S89 (1986); Marvin D. Krohn, James L. Massey & Mary Zielinski, *Role Overlap, Network Multiplexity, and Adolescent Deviant Behavior*, 51 SOC. PSYCHOL. Q. 346, 346–349, 354–355 (1988) (describing the importance of multiplexity for the study of delinquency).

<sup>48</sup> Though “weak ties”—such as causal acquaintances, old classmates, and friends-of-friends—are important in other types of behaviors, such as getting a job, finding a romantic partner, and certain business relationships. See Mark S. Granovetter, *The Strength of Weak Ties*, 78 AM. J. SOC. 1360 (1973).

Although interest in the intersection of network analysis and criminological research continues to grow,<sup>49</sup> this body of research currently faces two important limitations. First, the majority of network-oriented studies on crime have been conducted using school-aged and in-school youth.<sup>50</sup> Thus, like most studies on legitimacy, these surveys fail to capture the population groups that have the highest risk of sustained criminal involvement: school dropouts, institutionalized youths and young adults ages eighteen to twenty-four, active gang members or persons involved in other types of criminal organizations, and heavy drug or alcohol users.<sup>51</sup> The undersampling of these groups in the existing network studies censors our knowledge of network properties of adult active street criminals engaged in serious crime. Second, to the best of our knowledge, no network-oriented studies have looked at the influence a network exerts on perceptions of legitimacy. Even though Tyler (and others) posits a tangible effect of one's social network on legitimacy, this aspect of the procedural justice theory has yet to be operationalized using formal network methodology.

#### IV. WHY DO CRIMINALS OBEY THE LAW? WORKING HYPOTHESES

This study examines compliance and legitimacy among a sample of active offenders, many of whom have committed one or more violent crimes such as robbery or assault. The study is grounded theoretically in research traditions—social networks and peer influences, legitimacy, and procedural justice—that rarely intersect. Our empirical starting point is a unique population that has not yet been considered in compliance research or network studies of crime and violence.

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<sup>49</sup> See generally Papachristos, *supra* note 32 (regarding the use of social network analysis in criminological research).

<sup>50</sup> In particular, the majority of such studies have relied on a single data source—the National Longitudinal Study of Adolescent Health. See, e.g., Haynie, *supra* note 27; Dana L. Haynie & D. Wayne Osgood, *Reconsidering Peers and Delinquency: How Do Peers Matter?*, 84 SOC. FORCES 1109 (2005); Dana L. Haynie & Danielle C. Payne, *Race, Friendship Networks, and Violent Delinquency*, 44 CRIMINOLOGY 775 (2006); McGloin & Shermer, *supra* note 37.

<sup>51</sup> For important exceptions to this, see, for example, McGloin & Piquero, *supra* note 32 (analyzing co-offending networks in Philadelphia); Carlo Morselli, *Career Opportunities and Network-Based Privileges in the Cosa Nostra*, 39 CRIME L. & SOC. CHANGE 383 (2003) (analyzing career trajectories in organized crime); Carlo Morselli, Pierre Tremblay & Bill McCarthy, *Mentors and Criminal Achievement*, 44 CRIMINOLOGY 17 (2006) (analyzing the returns to illegal economic gains in criminal networks); Andrew V. Papachristos, *Murder by Structure: Dominance Relations and the Social Structure of Gang Homicide*, 115 AM. J. SOC. 74 (2009) (analyzing gang homicides in Chicago).

Several working hypotheses emerge from this intersection between research on legitimacy and research on social networks and crime. First is the extent to which processes of legitimacy and procedural justice might operate in a sample of offenders. Given that crime and violence are rare events, even among active street criminals, we hypothesize that legitimacy and procedural justice will operate in much the same way for criminal offenders as it does for non-criminal offenders. Namely, *offenders who have more favorable opinions of law enforcement are also more likely to view the law as legitimate.*

Second, and related to the first hypothesis, we expect perceptions of legitimacy and procedural justice to influence actual compliance with the law. That is, *offenders who have more favorable perceptions of the law will be more likely to comply with the law.* This is a direct test of the question of why offenders obey the law. Support for this hypothesis would suggest that offenders are more likely to comply with the law when they believe in its legitimacy, whereas evidence against this hypothesis would suggest that offenders comply with the law for reasons different than those identified in prior procedural justice research.

Network research offers a framework for explaining potential differences in compliance between offenders and non-offenders: the form and function of offenders' social networks may be different than the networks of non-offenders. Although we sample only an offending population, we can test a hypothesis concerning variation in the form and content *among* a diverse sample of offenders with varying levels of involvement in crime. While specific measures for network effects are discussed in the next section, some overarching hypotheses pertaining to the effects of an offender's social network can be derived. Specifically, we maintain that the *more saturated an offender's network with criminal, delinquent, or deviant persons, (a) the more negative that offender's perceptions of the law will be and (b) the greater the probability that offender will engage in law-violating behavior.*<sup>52</sup> Such hypotheses are consistent with the idea that an individual's attitudes, beliefs, and actions can be influenced by those in his immediate social network, and that the influences of peers grow stronger as networks become denser and network ties thicker. Put another way, such a hypothesis asserts that a respondent's view of the law will be influenced not only by his own experiences, but also

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<sup>52</sup> Both of these hypotheses are consistent with recent network studies of social influence, learning, and differential association theories. See Haynie, *supra* note 27; McGloin & Shermer, *supra* note 37; Danielle C. Payne & Benjamin Cornwell, *Reconsidering Peer Influences on Delinquency: Do Less Proximate Contacts Matter?*, 23 J. QUANTITATIVE CRIMINOLOGY 127 (2007).

the experiences of his peers, associates, friends, family, etc., with whom he is in frequent and meaningful contact.

Taken together, these hypotheses help to unpack the question at the heart of this paper: why do criminals obey the law? Invoking research on procedural justice and legitimacy, Hypothesis One argues that active criminals' views of the law will parallel those of average non-criminal citizens. Meanwhile, Hypothesis Two asserts that such perceptions of the law will influence subsequent compliance. Finally, Hypothesis Three contends that the structure of one's social network will also influence both perceptions of the law and subsequent compliant behavior. We now turn to a discussion of the data and methods used to test these claims: the Chicago Gun Project.

#### V. DATA AND METHODOLOGY

The data in this study were obtained from the CGP, a cross-sectional survey of 141 known gun offenders from a field experiment on reducing gun violence.<sup>53</sup> The surveys were collected *before* any treatment and, therefore, we make no use of the experimental aspect in our study nor do we make any related causal claims.<sup>54</sup> Survey questions focus on several areas, including: (1) perceptions of law, legal authority, and legal actors; (2) experiences with gun crime and gun use; (3) experiences with gangs and various deviant or criminal behaviors; and (4) various dimensions of the respondent's social networks. CGP survey questions were derived from prior survey research, especially the work of Tom Tyler,<sup>55</sup> the Project of Human Development in Chicago Neighborhoods,<sup>56</sup> Wright and Rossi's survey of gun offenders,<sup>57</sup> and the General Social Survey's network-generating questions.<sup>58</sup> Thus, the novelty of the CGP comes not from the specific questions asked, but from the population under investigation.

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<sup>53</sup> See Papachristos, Meares & Fagan, *supra* note 4.

<sup>54</sup> Treatment in this experiment entailed an hour-long group meeting with a panel of law enforcement and community representatives. The meeting was voluntary and was in no way related to conditions of parole or probation. The intervention and its effects on neighborhood-level crime rates are described in detail. *Id.* at 231–33.

<sup>55</sup> TYLER, *supra* note 2.

<sup>56</sup> Robert J. Sampson, Stephen W. Raudenbush & Felton Earls, *Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy*, 277 SCI. 918 (1997).

<sup>57</sup> JAMES D. WRIGHT & PETER ROSSI, *THE ARMED CRIMINAL IN AMERICA* (1985).

<sup>58</sup> Peter V. Marsden, *Core Discussion Networks of Americans*, 52 AM. SOC. REV. 122 (1987).



## A. SAMPLE

The study sample includes individuals living in high-crime neighborhoods in Chicago who have been arrested for at least one violent crime in the past. Although some prior research has surveyed incarcerated offenders with histories of serious violence including gun violence,<sup>59</sup> our sample includes individuals who were active “on the street” at the time they were interviewed. All participants were current or former offenders who were living in their communities at the time of the survey and, potentially, continued to be exposed to many of the same local social-structural conditions that impacted their prior offending. All individuals included in the sample had at least one prior arrest for a violent crime (robbery, assault, battery, etc.) and, since the time the surveys were collected, approximately 50% of the respondents have returned to prison. This activity pattern suggests that at least half of the sample can be considered “active” offenders in the sense that they continued to commit serious violent and gun-related crimes. In other words, at least half of the sample continued to disobey the law.

The sample was drawn randomly from all adults (over seventeen years old) who were on either probation or parole within the city during the survey year (2006–2007). Individuals were selected from both probation and parole in order to increase the potential variation in experiences with the criminal justice system. Probation is a less invasive form of punishment that is operated by the Cook County courts, whereas parole is operated by the Illinois Department of Corrections and therefore entails some period of incarceration.<sup>60</sup> Thus, the probation versus parole distinction serves as a proxy for exposure to the criminal justice system: those on parole are more likely to have had greater exposure to additional elements of the criminal justice system, as well as deeper involvement in criminal activities.

Three additional criteria were also used to determine sample eligibility. First, the sample was confined to individuals with at least one prior violent crime in their criminal record. This decision was driven by the design of the field experiment, which focused on gun violence as well as overrepresentation of non-violent drug offenders in the probation and parole population. For example, completely random samples of probation rosters yielded a large number of individuals charged with only a single drug

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<sup>59</sup> See WRIGHT & ROSSI, *supra* note 57; Jeffrey Fagan & Deanna L. Wilkinson, *Guns, Youth Violence, and Social Identity in Inner Cities*, 24 CRIME & JUST. 105 (1998).

<sup>60</sup> The Illinois Department of Corrections Parole Program supervises persons released from prison prior to the completion of their sentences through individualized monitoring and direct supervision in the community. See *IDOC Overview*, ILL. DEP’T CORR., [http://www.idoc.state.il.us/subsections/dept\\_overview/dept\\_overview.shtml](http://www.idoc.state.il.us/subsections/dept_overview/dept_overview.shtml) (last visited Mar. 1, 2012).

offense—indeed, nearly two-thirds of all adult probationers are charged solely with drug offenses.<sup>61</sup> Drug offenders are a heterogeneous group of criminal offenders. Some of them are involved in a variety of criminal activities, while others are simply buyers or sellers in local drug markets.<sup>62</sup>

The second criterion for inclusion was geographic. The sample was drawn mainly from target and control areas of an ongoing field experiment conducted in predominantly African-American communities. To avoid potential conflation with the concurrent experimental conditions, we sampled an additional forty-one respondents from randomly selected neighborhoods throughout the entire city. Figure 1 shows the geographic distribution of the sample. This map shows that the majority of the sample (71%) was drawn approximately equally from the intervention and control areas. The additional forty-one cases, though drawn randomly from across the rest of the city, were nevertheless geographically clustered in neighborhoods surrounding the target and control areas. This proximity reflects the spatial distributions of violent crime in Chicago.<sup>63</sup>

The final inclusion criterion was the length of time since the individual had been sentenced to either probation or parole. Offenders were eligible for the survey within the first six months of their release to parole or sentencing to probation. We drew additional random samples of individuals each month as new cohorts became eligible.

Sampled respondents were recruited to participate in the study in three ways. First, we mailed respondents a letter asking for their participation, explaining that their participation was in no way a condition of their release, and providing all the necessary human subjects materials. Second, we supplemented the letter with a follow-up phone request explaining the survey, its purposes, etc. We enlisted the assistance of probation and parole officers in securing the most recent address and phone number of the potential respondent for direct recruitment on our part in order to help track down respondents. Finally, we sought volunteer respondents from several programs that catered to the population of interest to the field experiment. No statistically significant differences were detected between respondents or item-specific responses based on the method of recruitment.

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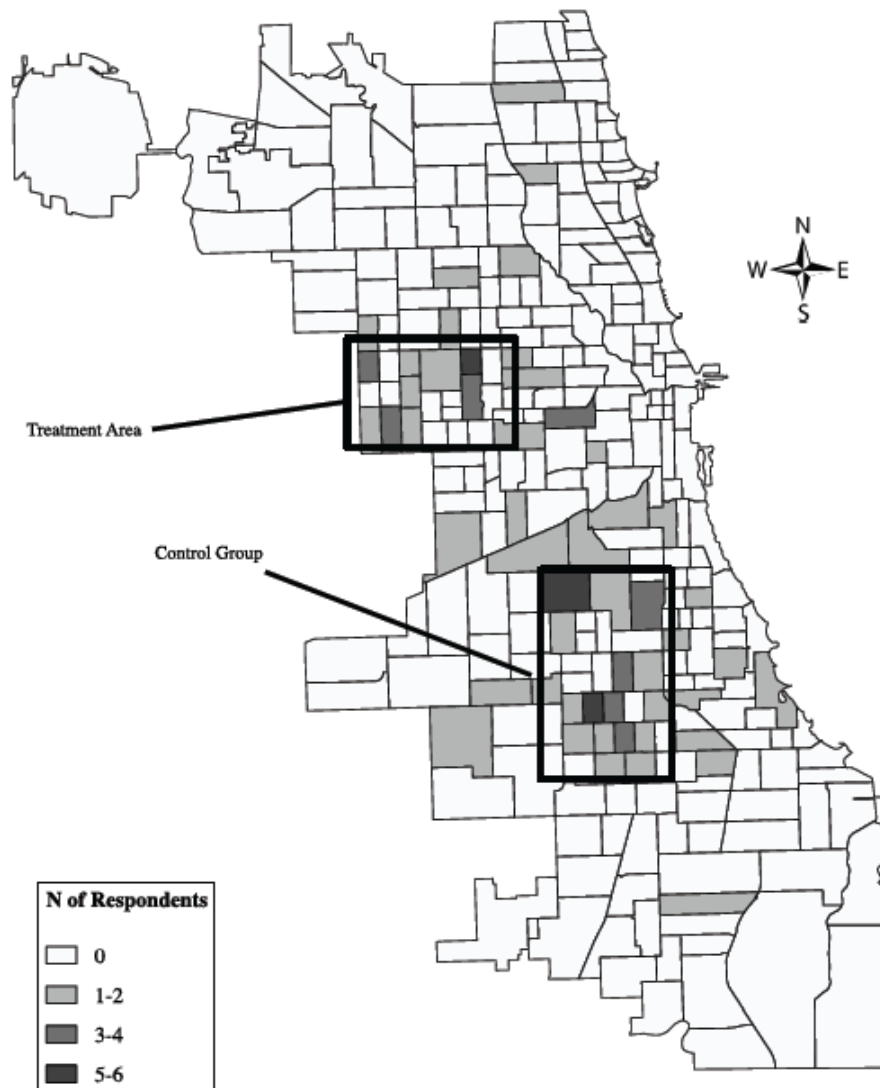
<sup>61</sup> We were financially constrained from gathering a larger, stratified sample.

<sup>62</sup> See, e.g., Peter Reuter, *Epilogue: Connecting Drug Policy and Research on Drug Markets*, 11 CRIME PREVENTION STUD. 319 (2000) (describing illegal drug markets).

<sup>63</sup> See, e.g., Wim Bernasco & Richard Block, *Where Offenders Choose to Attack: A Discrete Choice Model of Robberies in Chicago*, 47 CRIMINOLOGY 93 (2009) (analyzing the spatial distribution of crime in Chicago).

**Figure 1**

*Geographic Distribution of N = 141 Respondents of the Chicago Gun Project by Police Beats*



Near-peer interviewers administered the surveys in neutral locations, such as local community organizations, libraries, and schools.<sup>64</sup>

<sup>64</sup> Five interviews were conducted in respondents' homes due to mobility restrictions of respondents' release—i.e., curfew restrictions, electronic monitoring, etc.

Interviewers collected data using laptop-assisted personal interviewing systems, recording respondent information as the interview progressed. Written informed consent was obtained at the start of the interview, and all respondents were informed of human subjects protections. Importantly, interviewers stressed the survey's voluntary nature. Given the survey population, it was critical that we made sure that participation in the survey was in no way tied to release conditions. The interview took approximately one hour, and respondents received twenty dollars and a bus pass for their time.

The final sample includes 141 respondents. The overall response rate once a subject was contacted was approximately 60%.<sup>65</sup> Some biases undoubtedly exist given the nature of the subjects as well as the sampling frame. Of important note, our sample may be biased *against* drug offenders, other less serious offenders, and the most serious violent criminals who may be serving life sentences. Although life-course criminology might suggest that our sample might also contain a healthy sample of drug offenders as well as a few individuals who will commit additional serious crimes in the future, the cross-sectional nature of our survey does not allow for the analysis of future crime trajectories. However, no statistically significant differences in response rates are associated with neighborhood of residence, age, number of self-reported prior arrests, parole and probation status, or gang membership. We therefore are confident that our sample is representative of active violent street criminals in the study neighborhoods.

Basic sample characteristics are presented in Table 1. More than half (58%) were on parole at the time of the survey. Reflecting the social characteristics of the study areas, the vast majority of respondents are African-American (85%); most were male (92%) with less than a high school education (70%). Since the sample was drawn from adult probation and parole data, all respondents were over the age of eighteen, with an average age of thirty years old and a modal age of twenty-six (SD = 10 years). Variation existed in respondents' experience with gang participation and crime. Approximately 30% of the sample reported "having ever joined an organization that some people might call a gang." Respondents also report an average of ten arrests, but the standard deviation (7.6) suggests

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<sup>65</sup> The response rate reflects the tremendous amount of effort that went into actually locating respondents. Much of the initial information we received about our sample was out of date. Interviewers worked closely with probation and parole to obtain the most recent information. Our biggest challenge in our response rates was related to actually *finding* respondents. If one considered our response rate without actually locating respondents, the rate falls below 40%. Once we found respondents, however, the rate increased to 60%.

considerable variation and heterogeneity in the persistence of their criminal activity.

**Table 1**  
*Sample Characteristics and Descriptive Statistics*

<b>Variable</b>	<b>Mean</b>	<b>SD</b>
<b>Gender</b> (1 = Male)	0.92	0.28
<b>Race</b> (1 = African American)	0.85	0.34
<b>Age</b> (in years)	30.9	10.2
<b>Less H.S. Diploma</b> (1 = yes)	0.70	0.32
<b>Ever a Gang Member</b> (1 = yes)	0.30	0.45
<b>Currently Working</b> (1 = yes)	0.42	0.49
<b>Avg. N of Arrests</b>	10.1	7.6
<b>Parole vs. Probation</b> (1 = Parole)	0.58	

## B. MEASURES

The analysis proceeds in a two-step fashion: the first stage predicts an offender's perceived legitimacy of the law while the second stage tests the predictive effect (if any) of legitimacy on two types of criminal or deviant behavior, carrying a gun and getting in a fight. This section reviews the construction of the key variables before proceeding into the analysis itself. Descriptive statistics of these variables are presented in Table 2.

**Table 2***Summary and Descriptive Statistics of Dependent and Independent Variables*

	<b>Mean</b>	<b>SD</b>
<b>Legitimacy Index</b>	0.0001	0.349
<b>Deterrence Index</b>	-0.042	0.326
<b>Perceptions of Police Index</b>	-0.0004	0.339
<b>Perceptions of Prosecutors Index</b>	0.0003	0.284
<b>Carry a Gun</b>	0.702	0.458
<b>Fight in Last Year</b>	0.234	0.424
<b>N of Alters</b>	4.99	2.73
<b>Density</b>	0.797	0.281
<b>% Multiplex Ties</b>	0.415	0.308
<b>% of Criminal Alters</b>	0.247	0.227

*1. Legitimacy*

We define perceived legitimacy as the extent to which an individual states that he or she believes that the law (or legal agents) represents a just, fair, and valid basis of legal authority. Consistent with prior research, but especially Tyler,<sup>66</sup> we measure legitimacy as an index using four items (scaled 1 to 4, with 4 as “strongly agree”):

I feel that I should accept the decisions made by legal authorities.

People should obey the law even if it goes against what they think is right.

The law represents the values of people in power rather than the values of people like me. [reverse coded]

People in power use the law to try and control people like me. [reverse coded]

We then create a legitimacy index that measures an individual's overall view of legitimacy of the law: the higher the index score, the more favorable that person's responses on these items and, therefore, the more

<sup>66</sup> TYLER, *supra* note 2.

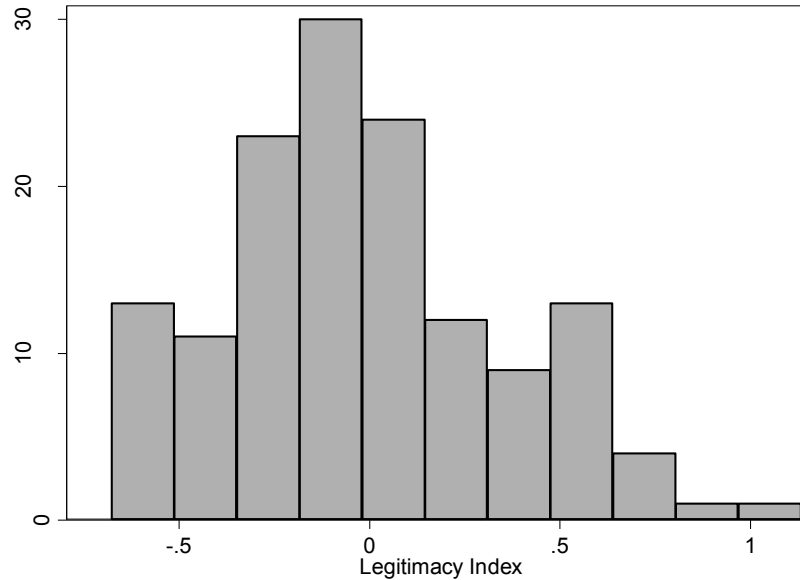
favorable his or her perceptions of the law. We use this index as both a dependent variable when trying to understand the overall construction of offenders' perceptions of the law and as an independent variable when examining subsequent offending behavior.

To create the index, we predicted each respondent's responses on these items using a latent variable model assuming that each of these items taps into a single latent construct we call "legitimacy." Following Raudenbush et al., we used a multivariate Rasch model with random effects in which the log odds of a given response depend on the personal propensity towards the view of the law as captured in the range of responses to the survey items.<sup>67</sup> The assumptions of this approach are: (1) that responses to the severity of each item, as well as person propensity, are additive in their effects; and (2) that item responses are conditionally independent. If these assumptions hold, then the outcome implies that the item set measures a unidimensional trait—perceptions of legitimacy—that yields a readily interpretable ordering of items and persons on an interval scale.<sup>68</sup> In this case, we use the empirical Bayes residual from the model as our measure of legitimacy. The resulting variable, as seen in Figure 2, is normally distributed, therefore lending itself to standard OLS regression techniques as well as more easily interpretable parameter estimates.

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<sup>67</sup> Stephen W. Raudenbush, Christopher Johnson & Robert J. Sampson, *A Multivariate, Multilevel Rasch Model with Application to Self-Reported Criminal Behavior*, 33 SOC. METHODOLOGY 169 (2003).

<sup>68</sup> *Id.* See generally GEORGE RASCH, *PROBABILISTIC MODELS FOR SOME INTELLIGENCE AND ATTAINMENT TESTS* (1980) (laying out statistical properties in the models used in our analysis).

**Figure 2***Distribution of Legitimacy Index*

### *2. Deterrence and Perceptions of Law Enforcement*

Using the same Rasch modeling approach, we also create three other indices of theoretical importance in the present study: a deterrence index, a perception of police index, and a perception of prosecutors index.

The deterrence index taps into the basic notion that increased enforcement and punishment (or threat thereof) would influence perceptions of the law and subsequent offending. The index is created using the following four binary (yes/no) items:

Do you think if the police spent more time walking the beat, people would be less likely to carry a gun?

Do you think if the police spent more time walking the beat, people would be less likely to commit a violent crime?

If the police stopped and searched people, do you think people would be less likely to carry a gun?

If gun users were receiving more attention from prosecutors and getting longer sentences, do you think people would stop using guns?

The resulting scale is roughly normally distributed, with a mean of approximately zero. The higher the respondent's score on the scale, the



more likely he is to believe that such enforcement efforts would have a deterrent effect.

We also created separate scales to capture respondents' opinions pertaining to two important criminal justice actors that may greatly impact perceptions of the law and legitimacy: the police and prosecutors. The perception of police index is created from the following four items:

Most police in my neighborhood are dishonest. [reverse coded]

Most police treat some people better than others. [reverse coded]

Most police do their job well.

Most police treat people with respect.

The perception of prosecutors index is created using the following three items:

Most State's Attorneys in the city are dishonest. [reverse coded]

Most State's Attorneys in the city treat some people better than others. [reverse coded]

Most State's Attorneys in the city do their job well.

Responses on all of these questions were coded on a four-point scale (1 = strongly agree to 4 = strongly disagree). The resulting indices are normally distributed, where a higher score on the index is associated with a more favorable opinion of police or prosecutors.

### C. SOCIAL NETWORKS

We measure the influence of a respondent's social networks using standard egocentric social network survey techniques.<sup>69</sup> More specifically, each respondent was asked a series of ten network "name-generators," questions in which the respondent is asked to list by name, nickname, or pseudonym individuals with whom he has some connection as identified in the question. All ten name generators are listed in Appendix A. The basic idea behind name generators is to prompt the respondent's memory with questions that tap into different types of relationships he may have and thereby produce a list of individuals in his social network. For example, respondents were asked to name individuals whom they have "gone out with socially" (e.g., to dinner, a movie, sporting event) in the past six months, individuals from whom they could borrow a "large sum of money," or individuals with whom they discuss "important matters."

Of the ten name-generating questions, three questions asked the respondent specifically about illegal or deviant relationships, including

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<sup>69</sup> For a review of network data and measurement issues, see WASSERMAN AND FAUST, *supra* note 39; Marsden, *supra* note 58.

whom the respondent could ask to help find a gun, whom (if anyone) the respondent was arrested with over the past two years, and whom the respondent could rely upon if he found himself in a fight. The respondent was allowed to mention as many names as he could think of, without any upper limit.<sup>70</sup> In this way, the series of name generators was designed to measure both pro-social and illegal social networks. The outcome of these name-generating questions is a list of individuals—called “alters”—whom the respondent has identified as social connections.

After completing the name-generating questions, the interviewer then asked the respondent a series of sixteen questions about *each* alter and about the relationship of each of the alters to each other. A complete list of alter questions is given in Appendix B. This section of the survey intended to get at the nature of the relationship between the respondent and the specific alter. For the present analysis, we were interested in the extent to which the named alter had some criminal propensity, which, according to the survey questions, might be captured if: (a) the alter is reported to be a gang member, (b) the alter is reported as having been arrested, or (c) the alter was named in one of the illegal name generators. The final set of alter questions asked the respondent to describe the relationship between each of the alters he named, even if he named them in different sections of the name-generating questions. The point of these questions is to determine the extent to which the respondent’s alters are also connected to each other.

The end result of these name-generating questions and alter-specific questions is a recall-contingent description of the respondent’s egocentric social network—the people in the respondent’s close social support network and the ties among them. Analysis of egocentric social networks is appropriate for the present analysis because prior research suggests that normative processes and social influences, such as those under investigation here, generally exert themselves *locally*.<sup>71</sup> Thus, the types of network effects that might be produced from egocentric network analysis parallel the research questions here: namely, the extent to which criminal alters in the respondent’s social networks may or may not influence his perceptions of the law and subsequent offending.

The main drawback of this egocentric approach is that *only* the respondent’s perceptions are known—i.e., we are unable to capture how the alters feel about the respondent and their own relationships with the

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<sup>70</sup> The CAPI system did impose an upper limit of thirty names, but no respondent used all thirty names. Interviewers were prepared to capture additional names using a paper system should the respondent list more than thirty alters.

<sup>71</sup> See, e.g., Marsden, *supra* note 58 (regarding the effects of ego networks on local behavior).

respondent and the other named alters. While egocentric approaches are well understood in survey-based studies, it does limit the current analysis in that our measurements are based on the respondent's perceptions as opposed to, say, some observational data on the ego's network or the triangulation of both ego and alter perceptions. In the present context, this means we lack a direct measure of alters' own views of legal agents, the law, and perceptions of legitimacy, which might be a preferred measure. As in other egocentric studies, the main caveat this imposes is that our results must be interpreted as the effect of the respondent's perception of his social networks.

The respondent's egocentric social network is used to construct four separate network measures consistent with the literature reviewed above: network size, network density, the percentage of multiplex ties, and the percentage of alters who are criminal. The first two measures represent aspects of a network's form—the actual shape and structure of the network—whereas the latter two measures speak to a network's *content*—the types of ties that are present. All of these measures suggest that social influence operates directly through socialization, interaction, and opportunities afforded through one's immediate circle of associates and friends.<sup>72</sup>

*Network size* is simply the total number of alters listed by the respondent. Network size may indicate a sense of network reach, in that a respondent with a larger network may have a deeper pool from which to choose associates.<sup>73</sup> *Network density* is measured as the proportion of all network ties that are present of all possible network ties. So, for example, a network density of 0.75 means that 75% of all possible ties that could be present are in fact present.<sup>74</sup>

Measures of *multiplicity of ties* and the percentage of ties that contain criminal elements are used to assess the impact of the content of the respondent's network on legitimacy and deviant behavior. *Multiplex relationships* are those network ties that operate in more than one dimension and are measured as the percentage of the respondent's alters

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<sup>72</sup> See, e.g., Haynie & Payne, *supra* note 50 (finding racial differences in network effects on delinquency); McGloin & Shermer, *supra* note 37 (providing evidence for local influence on social control in ego networks); Payne & Cornwell, *supra* note 52 (finding evidence of indirect influence of social networks on self-reported delinquency).

<sup>73</sup> See, e.g., Marsden, *supra* note 58, at 124, 125–128 (providing measures of network size in ego networks and evidence of its effect on discussion networks).

<sup>74</sup> See, e.g., *id.* (providing egocentric measures based on survey data). In the case of egocentric networks, network density is measured as the proportion of ties among the set of alters *excluding* ego.

who were named in more than one category of name-generating questions.<sup>75</sup> In a sense, such ties represent “strong ties” whereas less frequent or single-dimension ties better represent “weak ties.”<sup>76</sup> The last network measure of interest is the *percentage of ties in the respondent’s network that are reported as being criminal or deviant*. As stated in our hypotheses, the basic idea here is that the more saturated the respondent’s network is with criminal alters, the less likely he is to perceive the law as legitimate and the more likely he is to offend. Or, more to the point, the extent to which criminal alters saturate a network influences the respondent’s opinions of the law and subsequent offending. Preliminary analyses (not shown here) suggested that we break this measure into two binary threshold measures: (1) those networks in which less than half of the network consists of criminal associates (1 = yes), and (2) those networks in which more than half of the network consists of criminal associates (1 = yes).<sup>77</sup>

#### D. DEPENDENT VARIABLES

We use two separate dependent variables to test the effect of legitimacy and social networks on individual offending: gun carrying and fighting. Both measures are based on self-reported responses to survey questions and, therefore, are associated with all the known limitations of self-reported delinquency measures.<sup>78</sup> Unfortunately, we do not have the data to analyze or compare these self-reported measures with official arrest records. However, given that previous research suggests a high correlation between self-reported delinquency and the actual commission of delinquent acts as captured in official data—especially for more serious criminal and delinquent acts—we consider these measures to be an accurate assessment of the underlying behaviors under investigation.<sup>79</sup>

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<sup>75</sup> Krohn et al., *supra* note 47, at 347.

<sup>76</sup> See, e.g., Granovetter, *supra* note 48 (conceptualizing weak ties as those with less intensity and frequency, whereas strong ties tend to be multiplex and/or of greater frequency or intensity).

<sup>77</sup> This is due, in part, to the interaction of these variables with gang members, as discussed below.

<sup>78</sup> See Michael J. Hindelang, Travis Hirschi & Joseph G. Weis, *Correlates of Delinquency: The Illusion of Discrepancy Between Self-Report and Official Measures*, 44 AM. SOC. REV. 995 (1979); David Huizinga & Delbert S. Elliott, *Reassessing the Reliability and Validity of Self-Report Delinquency Measures*, 2 J. QUANTITATIVE CRIMINOLOGY 293 (1986); David S. Kirk, *Examining the Divergence Across Self-Report and Official Data Sources on Inferences About the Adolescent Life-Course of Crime*, 22 J. QUANTITATIVE CRIMINOLOGY 107 (2006).

<sup>79</sup> Robert Brame et al., *Criminal Careers of Serious Delinquents in Two Cities*, 2 YOUTH VIOLENCE & JUV. JUST. 256, 268–69 (2004).

The first outcome of interest is a binary variable indicating whether or not the respondent reported “ever carrying a gun outside of [his] home.” At the time of the survey, Chicago had extremely strict gun laws that made the possession, sale, carrying, or owning of a handgun illegal.<sup>80</sup> Thus, activities such as carrying a weapon on one’s person are by definition illegal and carry with them hefty penalties, especially for felons. We anticipate that legitimacy is negatively associated with carrying a weapon on one’s person, in part because carrying a gun outside of the home requires some forethought as to the actual act (Where will you carry it? In your backpack? In your waistband? Will it be loaded?) and, potentially, as to the consequences of getting caught. A recent network study suggests that gun carrying among adolescents is associated with popularity among delinquents and, as such, we anticipate that networks more saturated with criminal ties might also have a positive effect on gun carrying.<sup>81</sup>

The second outcome of interest is the respondent reporting involvement in a “physical fight or confrontation” in the past year. While not necessarily illegal, getting in a fight represents a potential act of aggression and a rather simple deviant act that respondents are not likely to shy away from reporting. Often times, physical confrontations happen in the spur of the moment without much forethought. Yet, many of the simple assaults and aggravated assaults reported by the respondents started as simple arguments or fights. As such, we consider fighting to be a qualitatively different crime than carrying a gun. Consistent with our hypothesis, we expect legitimacy to be negatively associated with fighting.

Gun carrying and fighting represent two quite different types of self-reported deviant behaviors. Given the health-related harms associated with gun violence, the gun-carrying outcome suggests that violence is more purposeful criminal behavior that signals the intent to threaten or to inflict bodily harm, compared to the more general and diverse behaviors that comprise “fighting.”<sup>82</sup> Its association with serious injury and death suggests that gun carrying is a far greater public safety concern meriting stronger legal responses. It is also of more direct relevance to the field experiment

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<sup>80</sup> Chicago’s gun law referred to here was struck down by the Supreme Court. See *McDonald v. City of Chicago*, 130 S. Ct. 3020 (2010).

<sup>81</sup> See Jan Kornelis Dijkstra, Siegwart Lindenberg, René Veenstra, Christian Steglich, Jenny Isaacs, Noel A. Card & Ernest V.E. Hodges, *Influence and Selection Processes in Weapon Carrying During Adolescence: The Roles of Status, Aggression, and Vulnerability*, 48 CRIMINOLOGY 187 (2010).

<sup>82</sup> 720 ILL. COMP. STAT. § 5/24-3.1(b) (2010) states that unlawful possession of a handgun is a Class 4 felony. Under 720 ILL. COMP. STAT. § 5/12-2(b) (2002), fighting can be either a misdemeanor or a felony assault, depending on whether a firearm is used in the crime. Thus, fighting encompasses a wide range of criminal acts and sentences ranging from a Class 4 felony to a Class A misdemeanor.

from which the CGP is derived. In contrast, fighting represents a much more heterogeneous type of behavior that encompasses a range of contexts and situations, e.g., bar fights, interpersonal disputes, domestic disputes, defensive violence, and so on. Our dependent variable outcome, then, is much more prone to interpretation by the respondent. Taken together, these two outcomes provide insight into two somewhat different deviant behaviors, including a serious break of the law (carrying a weapon) and at least the normative use of aggression (getting into a fight).

#### E. CONTROL VARIABLES

In addition to the variables listed above, we included controls for: age (measured in years), the race of the respondent (1 = Black, 0 = non-Black), whether the respondent had at least a high school diploma (1 = yes, 0 = no), whether the respondent is currently working (1 = yes, 0 = no), whether the respondent was on probation versus parole (1 = parole, 0 = probation), and whether the respondent has “ever belong[ed] to an organization that someone might call a ‘gang’” (1 = yes, 0 = no).

#### VI. RESULTS

Table 2 presents descriptive statistics of the key variables. As expected, all of the indices produce a mean that is close to zero, with standard deviations around one-third, suggesting that the assumptions of the latent variable model provide an outcome that is roughly normally distributed around zero. While these indices simplify interpretation of the statistical models, they tend to mask the extent to which the overall views of respondents are positive or negative. That is, while the indices allow associations between increases or decreases in the scales and the predicted outcomes, they do not provide a metric to assess the general views of offenders as to the legitimacy of the law or perceptions of law enforcement.

Overall, offenders have a positive perception of the law, although their views tend to be slightly more negative when compared with individuals found in non-offender samples. To illustrate this point, Figure 3 displays the dichotomized distribution (agree/disagree) responses for the question, “People should obey the law even if it goes against what they think is right.”<sup>83</sup> For comparison purposes, the distribution of responses on this question in our sample is compared with the dichotomized distribution on the same exact question Tyler and Huo asked in their general population (i.e., non-criminal) survey of 1,656 residents in Oakland and Los Angeles, California.<sup>84</sup> As seen in Figure 3, approximately 64% of our respondents

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<sup>83</sup> Other items in this scale yield roughly the same results.

<sup>84</sup> TYLER & HUO, *supra* note 24, at 108–10.

believe that people should obey the law even if it goes against what they think is right, whereas 77% of non-criminals in Tyler and Huo's study agree with the same statement.<sup>85</sup> This difference is just modestly statistically significant at the 0.05 level (Chi-square test), suggesting a small but perhaps meaningful difference between offenders and non-offenders on the impact of legitimacy on compliance. However, given the differences in the sample, one might have reasonably expected the differences in Figure 3 to be considerably greater.

While both offenders and non-offenders have positive views of the law more generally, differences in perceptions of law *enforcement* between the offender and non-offender populations are more dramatic. Figure 4 depicts differences in the dichotomized (agree/disagree) responses to the question "Most police . . . treat people with respect" in the study sample and the exact same question in Tyler and Huo.<sup>86</sup> In our sample, only 32% of the respondents agreed that most police treat people with respect, whereas 75% of the Tyler and Huo sample agreed (Chi-square = 1113.32;  $p < .001$ ).<sup>87</sup> This difference in distribution suggests that offenders, as a whole, have considerably more negative opinions of the police than do respondents in the general population surveys. This point bears repeating: *Just like the general population, offenders believe in the overall legitimacy of the law, yet on average they tend to have overwhelmingly negative views of the police.*

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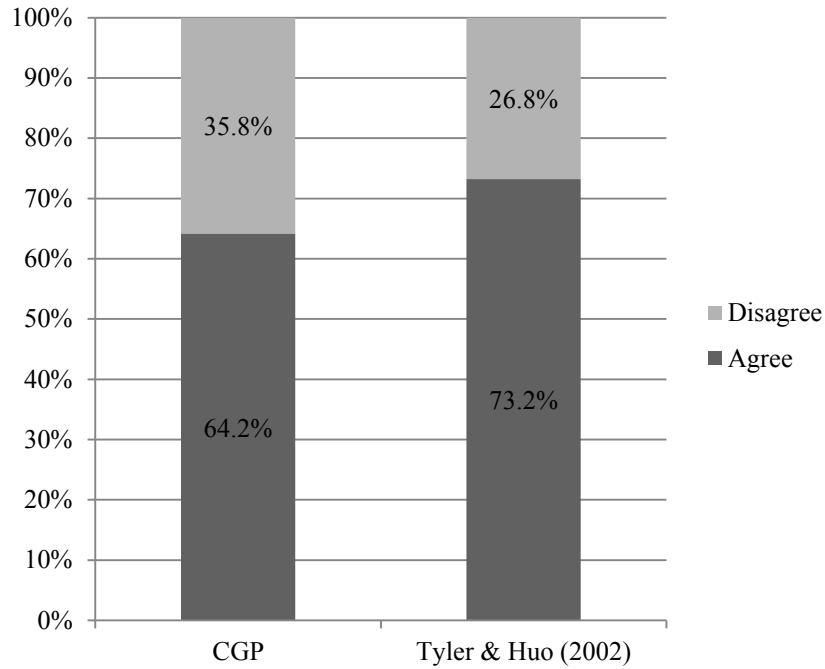
<sup>85</sup> *Id.*

<sup>86</sup> *Id.* at 109.

<sup>87</sup> *Id.* at 108–10.

**Figure 3**

*Proportion of Respondents from CGP and Tyler and Huo (2002) Samples that Agree/Disagree that “People Should Obey the Law Even If It Goes Against What They Think Is Right”*



Pearson Chi-Squared = 3.717,  $p = 0.054$

The descriptive statistics in Table 2 also inform us about the form and content of offenders' social networks. On average, respondents have an average network size of five individuals with a network density of nearly 80%. This means that offenders have rather large and extremely dense local social networks. While no comparable statistical analysis exists of adult offenders' social networks, these descriptive statistics are consistent with qualitative research descriptions of dense social networks in disadvantaged African-American neighborhoods in Chicago.<sup>88</sup> In addition,

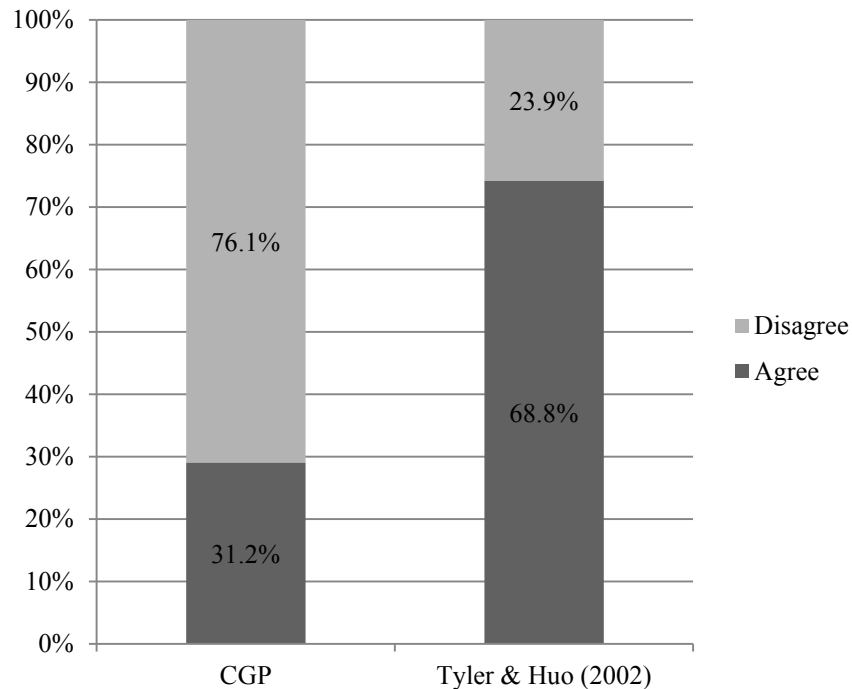
<sup>88</sup> See, e.g., MARY PATTILLO-MCCOY, *BLACK PICKET FENCES* (1999) (describing social networks in African-American middle class communities in Chicago); SUDHIR ALLADI VENKATESH, *AMERICAN PROJECT* (2000) (describing social networks in high-rise public housing in Chicago); WILLIAM J. WILSON, *THE TRULY DISADVANTAGED* (1987) (describing



nearly 41% of the ties in these networks are multiplex, suggesting that these dense networks are comprised of “strong ties” that cross over many social realms. Finally, on average, approximately 24% of a respondent’s network contains what we consider to be criminal ties.

**Figure 4**

*Proportion of Respondents from CGP and Tyler and Huo (2002) Samples that Agree/Disagree that “Most Police Treat People with Respect”*



Pearson Chi-Squared = 113.32,  $p < 0.0000$

#### A. PREDICTING LEGITIMACY

The first set of regression results in Table 3 presents the findings of a series of models in which the legitimacy index is regressed on the control, procedural justice, and network variables. Model (1) presents the results from a model regressing the control and procedural variables on the legitimacy index. Consistent with prior research, older respondents

how the socially disadvantaged in Chicago have networks that are extremely dense within poor communities, but are cut off from major social institutions).

( $\beta = 0.007$ ;  $p = 0.001$ ) and those with higher levels of education ( $\beta = 0.212$ ;  $p = 0.05$ ) are more likely to believe in the legitimacy of the law. In addition, parolees ( $\beta = -0.115$ ;  $p = 0.10$ ), who have had more contact with the criminal justice system, tend to have more negative views of the law, although only at the most lax significance levels.<sup>89</sup> To some surprise, the gang member variable ( $\beta = 0.096$ ;  $p = 0.10$ ) is *positive* and significant, suggesting that gang members, in fact, have *more* favorable opinions of the law than non-gang members do. One may hypothesize that gang members might have a greater appreciation of the law as a function of their membership in organizations with rules, codes of conducts, and obligations.

Model (1) also considers the key variables assessing the effect of opinions of police, prosecutors, and deterrence on the legitimacy index. The parameter estimate for the police index confirms prior research and provides considerable support for our hypothesis. The police index ( $\beta = 0.377$ ;  $p = 0.001$ ) is positive and highly significant, suggesting that respondents with more favorable opinions of the police are considerably more likely to have positive perceptions of the law. In other words, *just like non-offenders, it appears that an offender's perception of police is significantly related to his belief in the legitimacy of the law.* The deterrence index ( $\beta = 0.095$ ) also has a null effect on perceptions of legitimacy in all models. It thus seems that offenders' perceptions of police is one of the strongest predictors of their perceptions of the law.<sup>90</sup> This variable has the largest effect of all the variables in Model (1). The effect of the prosecutor variable is positive, but not statistically significant.<sup>91</sup>

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<sup>89</sup> See, e.g., Hagan et al., *supra* note 24 (concluding that differences in attitudes among students varies by prior contact with police).

<sup>90</sup> Recent neighborhood-level research finds a similar effect of interaction with the police and levels of "legal cynicism." See, e.g., Kirk & Papachristos, *supra* note 22, 1222–26 (finding a strong association between contact with police and levels of legal cynicism).

<sup>91</sup> Although not included in the survey itself, fieldwork conducted by one of the authors during the survey period suggests that offenders believe that prosecutors are generally "smarter" and "more professional" than police. As one forum participant explained to one of the authors:

"The cops, man, they just like us. You know what I mean? They got a job, they out there, doing their thing . . . but, those lawyers, man, they had to go to school. They got a degree. Had to take tests . . . they don't have as much discretion. They got to follow the law too. Sure, they can bend it a bit, but they have rules they play by . . . cops, bend it a whole hell of a lot more." Verbal communication with author (Chicago, Mar. 11, 2006).

**Table 3**

*OLS Regression of Perceptions of Legitimacy on Individual, Procedural Justice, and Network Characteristics (N = 141)*

	(1)	(2)	(3)
Age (in years)	0.00743** (0.0027)	0.00780** (0.0026)	0.00645* (0.0026)
Black (1 = yes)	-0.0931 (0.075)	-0.108 (0.075)	-0.117 (0.072)
High School Diploma (1 = yes)	0.212* (0.091)	0.216* (0.089)	0.228** (0.085)
Currently Working (1 = yes)	-0.0461 (0.054)	-0.0313 (0.052)	-0.0292 (0.050)
Gang Member (1 = yes)	0.0958+ (0.057)	0.0786 (0.057)	0.0935 (0.10)
Parole vs. Probation (1 = parole)	-0.115+ (0.059)	-0.113* (0.057)	-0.128* (0.055)
Perceptions of Police	0.337*** (0.082)	0.370*** (0.081)	0.341*** (0.078)
Perceptions of Prosecutors	0.144 (0.095)	0.139 (0.091)	0.0865 (0.089)
Deterrence Index	0.0947 (0.081)	0.0751 (0.079)	0.0579 (0.076)
N of Alters		-0.0106 (0.010)	-0.000771 (0.010)
Density of Ego Network		-0.155+ (0.089)	-0.160+ (0.085)
% Ties that are Multiplex		0.206* (0.085)	0.182* (0.081)
Less than 50% of alters have been arrested		0.176** (0.061)	0.131* (0.066)
Greater than 50% of alters have been arrested		-0.0306 (0.071)	0.156+ (0.089)
Gang Member * Less than 50% of alters have been arrested			0.229+ (0.13)
Gang Member * Greater than 50% of alters have been arrested			-0.440** (0.13)
At least one gang member in Ego Network			-0.124+ (0.066)
Constant	-0.285+ (0.15)	-0.306+ (0.17)	-0.270 (0.17)
Observations	141	141	141
R-squared	0.30	0.39	0.45

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.10

Model (2) adds the network variables to the equation. Three network variables in the model are statistically significant: network density ( $\beta = -0.155$ ;  $p = 0.10$ ), percent multiplex ties ( $\beta = 0.206$ ;  $p = 0.05$ ), and less than 50% of ties that have been arrested ( $\beta = 0.176$ ;  $p = 0.01$ ). The network density parameter suggests that for individuals whose social worlds are more “closed,” there is a *negative* effect on perceptions of legitimacy. Conversely, this suggests that individuals in less dense networks have more favorable opinions of the law. The percentage of multiplex ties has a positive and statistically significant effect on perceptions of legitimacy, thus suggesting that *strong* ties exert a greater effect on one’s perceptions of the legitimacy of the law. Finally, there is a positive and statistically significant association between individuals whose networks are comprised of less than 50% of criminal alters: individuals in networks less saturated with criminal alters tend to have more favorable opinions of the law. In other words, having some but not a majority saturation of criminal ties in one’s network actually *increases* one’s perception of the law as legitimate. In contrast, the association for those individuals with greater than 50% of their ties as criminal is negative, but not statistically significant ( $\beta = -0.03$ ).

The positive but marginally significant effect of the gang member variable in Model (1) disappears in Model (2) when the network variables are added. Given the differences between gang and non-gang members discussed in the literature on group processes and gangs,<sup>92</sup> we further decomposed some of the network effects by adding in interaction terms for the percentage of criminal alters and gang membership in Model (3).<sup>93</sup> The result is two additional dummy variables: (1) self-identified gang membership \* less than 50 percent of alters are criminal, and (2) self-identified gang membership \* greater than 50 percent of alters are criminal. These variables are designed to identify two types of gang members: those whose networks are only partially saturated with criminal alters, and those whose networks are completely saturated with criminal alters. These two variables also correspond roughly with the more traditional distinction between “periphery” and “core” gang members in the literature.<sup>94</sup> When these two variables are in the equation, the dummy variable for gang member is interpreted as a gang member who did not identify any criminal

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<sup>92</sup> See, e.g., THORNBERRY ET AL., *supra* note 45, at 96–121 (concluding that gang delinquency is related to processes within the gang itself and not simply selection into gangs based on individual characteristics or dispositions).

<sup>93</sup> No discernible differences in network size or density were detected when interacted with gang membership and are therefore not included in the model.

<sup>94</sup> MALCOLM W. KLEIN & CHERYL L. MAXSON, STREET GANG PATTERNS AND POLICIES 152–54 (2006).

alters in his network. To test for the effect of any alter being a gang member, an additional dummy variable was added to indicate if *any* of the respondent's alters was identified as a gang member (1 = yes; 0 = no).

Model (3) adds the two gang member \* percent criminal alters interaction variables to the equation. As in the previous models, the police index remains one of the strongest predictors of legitimacy ( $\beta = 0.341$ ;  $p = 0.001$ ). Network density ( $\beta = -0.160$ ;  $p = 0.10$ ) and percent multiplex ties ( $\beta = 0.182$ ;  $p = 0.05$ ) also retain their statistical significance. When all four of the percentage criminal alter variables are added in the equation, three of them have a *positive* effect on perceptions of legitimacy: non-gang members with < 50% criminal alters ( $\beta = 0.131$ ;  $p = 0.05$ ), non-gang members with > 50% criminal alters ( $\beta = 0.156$ ;  $p = 0.10$ ), and gang members with < 50% criminal alters ( $\beta = 0.229$ ;  $p = 0.10$ ). Only gang members with highly saturated (> 50%) criminal networks have a strong *negative* effect on legitimacy ( $\beta = -0.440$ ;  $p = 0.01$ ). Put another way, for all of the groups in the sample *except* for core gang members, having criminal alters actually *increases* perceptions of legitimacy. This suggests that perhaps non-gang members and non-core gang members may actually learn some respect for legal authority from alters with criminal experiences, especially when their networks are not completely saturated with criminal alters—i.e., when there is heterogeneity in the types of alters to which the ego is exposed. In contrast, for gang members in networks saturated with criminal alters, the effect is highly negative.

Thus far, all of the models provide considerable support for one of our key hypotheses: offenders with more positive opinions of legal agents, but especially of the police, also tend to have more positive perceptions of the legitimacy of the law. It appears that the notions of procedural justice found in the general population are similar to those of active gun offenders. Furthermore, several network effects appear to exist above and beyond any individual effects and independently of the influence of police. In particular, strong network ties and networks less saturated with criminal alters appear to have a positive effect on perceptions of the law, while network density has a negative effect. The main exception to our hypothesis regarding the effect of the percentage of criminal alters in one's social network appears to be gang members with networks highly saturated with criminal alters. In these cases, the effect of criminal alters is highly *negative*—i.e., these alters appear to decrease the respondent's perceptions of the legitimacy of the law.

## B. LEGITIMACY AND OFFENDING

The final stage of analysis uses a series of logistic regressions to predict the effect of the legitimacy index and network variables on two

different dependent variables: carrying a gun outside of one's home and getting into a fight in the past year. Table 4 lists the unstandardized coefficients and standard errors from these models.

**Table 4**

*Logistic Regression of Carrying a Gun Outside of Home and Getting Into a Fight in the Last 6 Months on Individual, Procedural Justice, and Network Variables*

	Carry a Gun (1 = Yes)			Fight in Last 6 months (1 = yes)		
	(1)	(2)	(3)	(4)	(5)	(6)
Age (in years)	-0.0204 (0.019)	-0.0117 (0.021)	0.00384 (0.023)	-0.0853** (0.030)	-0.0625* (0.030)	-0.0596+ (0.031)
Black (1 = yes)	0.0733 (0.56)	-0.216 (0.61)	-0.345 (0.61)	0.217 (0.64)	0.539 (0.76)	0.450 (0.77)
High School Diploma (1 = yes)	0.346 (0.66)	0.416 (0.71)	0.917 (0.76)	-1.451* (0.72)	-1.348+ (0.80)	-1.278 (0.81)
Currently Working (1 = yes)	0.778+ (0.42)	0.863+ (0.44)	0.813+ (0.44)	-0.140 (0.46)	0.0909 (0.52)	0.109 (0.52)
Gang Member (1 = yes)	0.523 (0.44)	0.415 (0.53)	0.648 (0.56)	1.407** (0.45)	0.810 (0.59)	0.866 (0.60)
Parole vs. Probation (1 = parole)	0.663 (0.42)	0.484 (0.45)	0.273 (0.46)	-0.0290 (0.49)	-0.279 (0.57)	-0.355 (0.58)
N of Alters		-0.170+ (0.088)	-0.177* (0.088)		0.0604 (0.13)	0.0684 (0.13)
Density of Ego Network		1.276+ (0.70)	1.010 (0.72)		0.659 (0.90)	0.623 (0.92)
% Ties that are Multiplex		0.271 (0.71)	0.461 (0.73)		-0.103 (0.87)	0.0366 (0.90)
Less than 50% of alters have been arrested		-0.349 (0.52)	-0.131 (0.54)		-1.879** (0.70)	-1.788* (0.71)
Greater than 50% of alters have been arrested		-0.483 (0.61)	-0.467 (0.60)		0.890 (0.75)	0.831 (0.76)
Gang Member * Less than 50% of alters have been arrested		a	a		-2.434* (1.05)	-2.395* (1.06)
Gang Member * Greater than 50% of alters have been arrested		0.961 (0.88)	0.619 (0.90)		a	a
At least one gang member in Ego Network		0.385 (0.64)	0.390 (0.67)		2.088* (0.81)	2.012* (0.82)
Perceptions of Legitimacy			-1.537* (0.75)			-0.581 (0.82)
Constant	0.274 (1.03)	0.147 (1.38)	-0.512 (1.44)	2.156+ (1.25)	0.979 (1.65)	0.817 (1.68)
Observations	138	138	138	141	141	141
-2 (Loglikelihood)	-78.83	-73.75	-71.53	-63.76	-54.96	-54.71

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.10

a = variable perfectly predicts failure, not included in model

Models (1) through (3) demonstrate the results from the gun-carrying variable. Model (1) shows that the only individual-level variable with a statistically significant effect on carrying a gun is whether or not the

respondent was currently working—a pattern that holds in Models (2) and (3).<sup>95</sup> Model (2) adds the network variables, two of which (network size and density) approach but do not quite achieve statistical significance at the 0.05 level. The direction of these parameters suggests that the likelihood of carrying a gun outside one's home depends on the *size* of one's network: those with larger networks are less likely to carry guns outside their homes. Prior research has interpreted the size of one's network as related to scope, in that those with larger networks might possibly have ties to a greater number of social circles.<sup>96</sup> Thus, one possible explanation for this effect is that increased network size provides individuals with more options to choose from when deciding with whom they would like hang out on any given day. The *density* of a respondent's network also has a positive effect on carrying a gun, although again, this variable does not quite reach significance at the 0.05 level. Finally, although not statistically significant, the percent-criminal-alters variables appear to work in the same complex manner that they did for the legitimacy index. Having a criminal alter appears to be protective for non-gang members, but harmful for gang members in networks highly saturated with criminal alters.<sup>97</sup>

Model (3) examines the extent to which the legitimacy index predicts gun carrying. As predicted, the effect of the legitimacy index is negative and statistically significant ( $\beta = -1.54$ ,  $p = 0.05$ ). *Those who report more positive opinions of the law are less likely to report carrying a gun.* This variable has the largest effect of all variables in the models and improves overall model fit. In these models the network size variable also achieves statistical significance ( $\beta = -0.155$ ,  $p = 0.05$ ) when controlling for the legitimacy index. Model (3), therefore, suggests that both legitimacy and networks have an effect on carrying a gun.

Models (4) through (6) examine the fighting variable. Model (4) shows that age ( $\beta = -0.085$ ;  $p = 0.01$ ) and education ( $\beta = -1.45$ ;  $p = 0.05$ ) have a negative effect on fighting. Older respondents and those with more education are less likely to report getting into a fight. Furthermore, and consistent with prior research, gang members are more likely to report getting into a fight ( $\beta = 1.41$ ;  $p = 0.001$ ).

The network variables are added in Model (5). Network size ( $\beta = 0.060$ ) and density ( $\beta = 0.658$ ) do not appear to have statistically significant effects on getting into a fight. However, once again individuals

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<sup>95</sup> The positive value of the parameter is most likely due to the fact that most of the probationers and parolees were employed as part of their release or sentence.

<sup>96</sup> BURT, *supra* note 43, at 31–32, 51–54.

<sup>97</sup> The gang members \* less than 50% criminal alters are dropped from Models (2) and (3) because there was no variation in these cases. None of those individuals reported carrying a gun outside the home.

with fewer than half of their alters reported as being criminal have a reduced probability of getting in a fight.<sup>98</sup> Finally, there also appears to be a statistically significant effect of having even a single gang member in one's social network ( $\beta = 2.088$ ;  $p = 0.05$ ).

Model (6) adds the legitimacy index, which is negative, but not statistically significant ( $\beta = -0.581$ ). In addition, model fit does not increase relative to Model (5). This finding suggests that one's perceptions of legitimacy have no effect on the likelihood of getting into a fight. The network variables retain their significance in this model. The lack of significance here suggests that while perceptions of legitimacy influence crimes that require some forethought (like deciding to carry a gun on your person), perceptions of legitimacy do not appear to influence getting into a fight—which prior research suggests tends to be less planned and covers a more heterogeneous and subjective set of contexts and circumstances.<sup>99</sup>

## VII. DISCUSSION AND CONCLUSION

Sociological studies of crime and deviance tend to focus on the reasons why individuals *break* the law. Most of these studies give virtually no consideration to the simple fact that criminally prone individuals spend the vast majority of their time in compliance with the law. Just like “normal” people, criminals obey traffic signals even if no one is watching, refrain from shoplifting, and try to avoid violent situations. In contrast, research on compliance with the law is based on data taken from general population surveys and, as such, tends to overlook the segment of the population responsible for most criminal offending—especially most violent street crime. While both strands of research offer insight into law-violating and law-abiding behaviors, they have overlooked the ways in which perceptions of the law influence compliant *and* deviant behaviors, especially among the segment of the population most prone to criminal activity.

By invoking research on legitimacy and procedural justice as well as an understanding of the effect of networks on social behaviors, this study asks: why do criminals obey the law? Consistent with prior legitimacy research, we hypothesized that criminals behave like their non-criminal counterparts—namely, that more positive perceptions of law enforcement will be associated with positive opinions of the law more broadly, and, in turn, that positive perceptions of the law will be associated with compliant behavior. We further argued that the contours of an individual's social

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<sup>98</sup> The gang member \* > 50% criminal alters variable perfectly predicts failure—i.e., all of these individuals reported getting into a fight.

<sup>99</sup> Fagan & Wilkinson, *supra* note 59, at 137–74.



network influence both her perceptions of the law as well as her compliance with the law.

Our findings offer several insights into understanding active offenders' perceptions of the law and legal authority, as well as providing an answer to the general question we have posed. Our data demonstrate that, on average, offenders in our sample tend to believe in the legitimacy of law. At the same time, sample participants have overwhelmingly negative views of police. In all of the models predicting legitimacy, the police index has the strongest and most consistent effect on an offender's perception of the law, net of all other control and network variables.

The results also illustrate the influence of social networks on both perceptions of the law and offending. Whereas previous research hypothesizes about the effect of peer influence on perceptions of the law, this study directly measures the effect of various characteristics of the respondent's ego networks seem to have a negative effect on perceptions of legitimacy, suggesting that closed networks—especially those saturated with criminal alters—decrease perceptions of legitimacy. However, the *content* of an offender's social network also appears to have an effect on his perceptions of the law and must be considered in conjunction with density. When criminal alters are present in a non-gang member's social network, the effect appears to be *positive* on the individual's perceptions of the law: having more criminals in one's network tends to be associated with more favorable opinions of the law, suggesting a sort of "learning from the mistakes" of one's associates. The same effect appears to occur for gang members in networks where less than 50% of their alters are criminal. The main difference in this network effect is for gang members in highly criminally saturated networks, in which case the effect is negative. Consistent with classic learning theories, the case of "core" gang members suggests that being associated with a large number of criminal alters is related to negative opinions of the law.

These findings provide some answers to our basic research question: *why do criminals obey the law?* The answer is that offenders comply with the law for many of the same reasons as non-offenders do. The offenders in our sample were more likely to believe in the legitimacy of the law and its agents when they reported having more positive perceptions of police. Furthermore, those individuals with more positive perceptions of the law were less likely to carry a gun outside of their homes. Interestingly, however, legitimacy does *not* appear to have an effect on getting into a fight, whereas the network variables do appear to have an effect. We believe this divergence likely stems from the different nature of these two acts: carrying a weapon requires some forethought, while getting into a fight is generally an unplanned, impulsive event that can happen in a variety

of circumstances and could just as well be defensive as not. In other words, the volition to fight is highly contingent on the context, spark, and interaction dynamics that are intrinsic to network interactions where disputes are likely and there are limited means to resolve them. As such, people might be more influenced by their perceptions of the law for crimes that require active thinking, as opposed to reactive situations such as fights, which tend to happen out of unplanned situational factors.

This study is not without limitations. At least three are worth further consideration. First, at the present time our findings are largely circumscribed by the survey's sample: mainly violent offenders in high-crime and predominantly African-American neighborhoods in Chicago. The point of this study was to shed light on the perceptions of the law held by highly active "criminals" in urban settings. By design, our study excludes simple drug offenders, non-violent offenders, and individuals who do not reside in high-crime African-American communities. We are hopeful that future research will expand this type of research to other settings and offending populations.

Second, our findings pertaining to any determined network effects are also constrained by the survey sample. To date, most survey research on social networks and crime has been drawn from samples of school-aged youth, with dependent variables constructed from "delinquency" indices. In contrast, our sample is of active adult street criminals, and our dependent variables of interest were not mere delinquent acts (e.g., underage drinking), but more serious criminal offenses like carrying a firearm illegally. While some of our findings support this previous survey research, to the best of our knowledge no such comparable network survey of non-incarcerated adult street criminals exists. Future network-oriented research should continue to explore new and creative ways of capturing the social networks of street criminals and the ways in which those networks influence behaviors and opinions.

Finally, Chicago's gangs tend to be larger and more organized than gangs in most other cities.<sup>100</sup> Therefore, the noticeable effect of "core" gang members in this study might also be limited to Chicago. However, the core versus periphery status of gang membership has been well documented in other locations, suggesting that our distinction based on network saturation has firm empirical grounding across different geographic

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<sup>100</sup> This is a standard critique of nearly all gang research emanating from Chicago. See, e.g., Cheryl L. Maxson & Malcolm W. Klein, *"Playgroups" No Longer: Urban Street Gangs in the Los Angeles Region*, in *FROM CHICAGO TO L.A.* 235 (Michael J. Dear ed., 2002).

locations.<sup>101</sup> Furthermore, network studies by Fleisher and McGloin also highlight the different structural positions of gang members within larger social networks, thus lending further support to our differentiation of respondents based on the composition of their networks.<sup>102</sup>

## APPENDICES

### A. EGOCENTRIC NAME-GENERATOR QUESTIONS

#### *1. Introduction*

Next I want to ask you some questions about the people you interact with in various ways. This information will help to better understand the social support system of local residents. Please understand that I'm not interested in the full names of the people you interact with, and we will not be contacting them, so please just provide their first name or their nickname. We are interested in their characteristics and what neighborhood they live in. We're not interested in exact addresses. Feel free to name as many people as you like.

#### *2. Pro-Social Networks*

1. There are some household jobs you can't really do alone—for example, you may need someone to hold a ladder or to help you move furniture. Who would you turn to for help?
2. Who have you gone out with socially in the past six months? For example, to dinner, the movies, or a sports event?
3. In the past six months, who have you worked with to help deal with a neighborhood problem? For example, public safety issues or traffic problems?
4. Who are the people in your neighborhood that while you do not consider them friends, you are polite to because you do not want to create problems?
5. Suppose you had an important matter to discuss, for example, an important change in your life, problems with a loved one, or just feeling down or depressed. Looking back over the last six months, who are the people with whom you discussed matters important to you?
6. Suppose you needed to borrow a large sum of money, who would you turn to for help?
7. If you needed help finding a job, whom would you ask about possible jobs?

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<sup>101</sup> See generally KLEIN & MAXSON, *supra* note 94.

<sup>102</sup> E.g., Mark S. Fleisher, *Doing Field Research on Diverse Gangs: Interpreting Youth Gangs as Social Networks*, in GANGS IN AMERICA III, at 119, 202–10 (C. Ronald Huff ed., 2002) (demonstrating that the networks of gang girls extend to a great degree into non-gang networks); Jean Marie McGloin, *Policy Intervention Considerations of a Network Analysis of Street Gangs*, 4 CRIMINOLOGY & PUB. POL'Y 607, 619–20 (2005) (showing that familial and non-criminal relationships play an important role in determining gang networks).

### *3. Illegal Networks*

8. Suppose you needed to obtain a gun for some reason, who would you go to for help finding one?
9. Looking back over the past two years, can you name some people whom you were arrested/picked-up with by the police? [Have you ever been charged on a case with any of your friends or associates? What about the case you are on probation for?]
10. Who could you count on to have your back in a pinch/fight?

## **B. ALTER QUESTIONS FROM NAMES OBTAINED FROM EGOCENTRIC-GENERATOR QUESTIONS**

### *1. The Alter Questions*

1. What is \_\_\_\_\_'s gender?
2. What do you consider your relationship to \_\_\_\_\_ to be? Some people can be connected to you in more than one way. Tell me all the ways that person is connected to you.
3. Do you work with \_\_\_\_\_?
4. Does \_\_\_\_\_ belong to any organizations or clubs with you?
5. How old is \_\_\_\_\_?
6. What is \_\_\_\_\_'s race?
7. What is the highest level of education \_\_\_\_\_ has completed?
8. Regarding \_\_\_\_\_'s work or employment status, is \_\_\_\_\_ currently employed?
9. Does \_\_\_\_\_ live in your neighborhood?
10. What are the cross streets nearest \_\_\_\_\_'s home?
11. Does \_\_\_\_\_ live on the same block as you?
12. What is \_\_\_\_\_'s marital status?
13. How often do you talk to \_\_\_\_\_?
14. How long have you known \_\_\_\_\_?
15. To the best of your knowledge, has \_\_\_\_\_ ever been arrested for a violent or gun-related crime?
  - a. If YES, have you ever been involved in such an incident with \_\_\_\_\_?
16. Is \_\_\_\_\_ a gang member?
  - a. If YES, what gang is \_\_\_\_\_ affiliated with/belong to?

### *2. Ties Between Alters*

This section is intended to get an idea of how connected various people within your social network are to each other. Please think about the relationship between the

people you just mentioned. Some of them may be total strangers in the sense that they wouldn't recognize each other if they bumped into each other on the street. Others may be especially close, as close or closer to each other as they are to you. I will be asking how well you know two people you previously mentioned. Your answer options include: strangers (0), not strangers but not close (1), close (2).

How well do ALTER 1 and ALTER 2 know each other?